CANADA
DEPARTMENT
OF
MINES AND TECHNICAL SURVEYS

GEOLOGICAL SURVEY OF CANADA

DIAGRAMMATIC CROSS-SECTION ALONG LINE A-B

PRELIMINARY SERIES

SHEET 11 E/4

LEGEND

MESOZOIC

TRIASSIC

8 — *ANNAPOLIS FORMATION:* red conglomerate, sandstone

CARBONIFEROUS

MISSISSIPPIAN (?) OR PENNSYLVANIAN

7 — *SCOTCH VILLAGE FORMATION:* sandstone, shale, minor conglomerate

MISSISSIPPIAN

WINDSOR GROUP (4-6)

6 — *Limestone, gypsum, anhydrite, red shale, salt; may include undivided 4 and 5*

5 — *PEMBROKE FORMATION:* limestone-conglomerate, red limestone, shale

4 — *MACUMBER FORMATION:* bedded arenaceous limestone

HORTON GROUP

3 — *Conglomerate, sandstone, shale*

PALÆOZOIC

MEGUMA GROUP (1,2)

2 — *HALIFAX FORMATION:* slate, argillite; minor quartzite

PRECAMBRIAN(?)

1 — *GOLDENVILLE FORMATION:* quartzite, slate

Rock outcrop
Geological boundary (approximate, assumed)
Bedding (horizontal, inclined, vertical)
Schistosity (inclined, vertical)
Drag fold (arrow indicates direction of plunge)
Fault (defined, approximate, assumed)
Anticline (approximate)
Syncline (approximate)
Glacial striæ (direction of movement known, unknown)
Fossil locality
Karst topography
Quarry (gypsum, GYP; limestone, LS; sandstone, SS)
Mineral prospect or abandoned mine
Adit
Coal outcrop

MINERAL PROSPECTS OR ABANDONED MINES

1 Hibernia Prospect (manganese)
2 Hibernia Mine (manganese)
3 Walton River Prospect (lead)
4 McLean Brook (gold)
5 West Gore (antimony)
6 Centre Rawdon (gold)
7 Rawdon Gold Mines (gold)
8 Renfrew (gold)

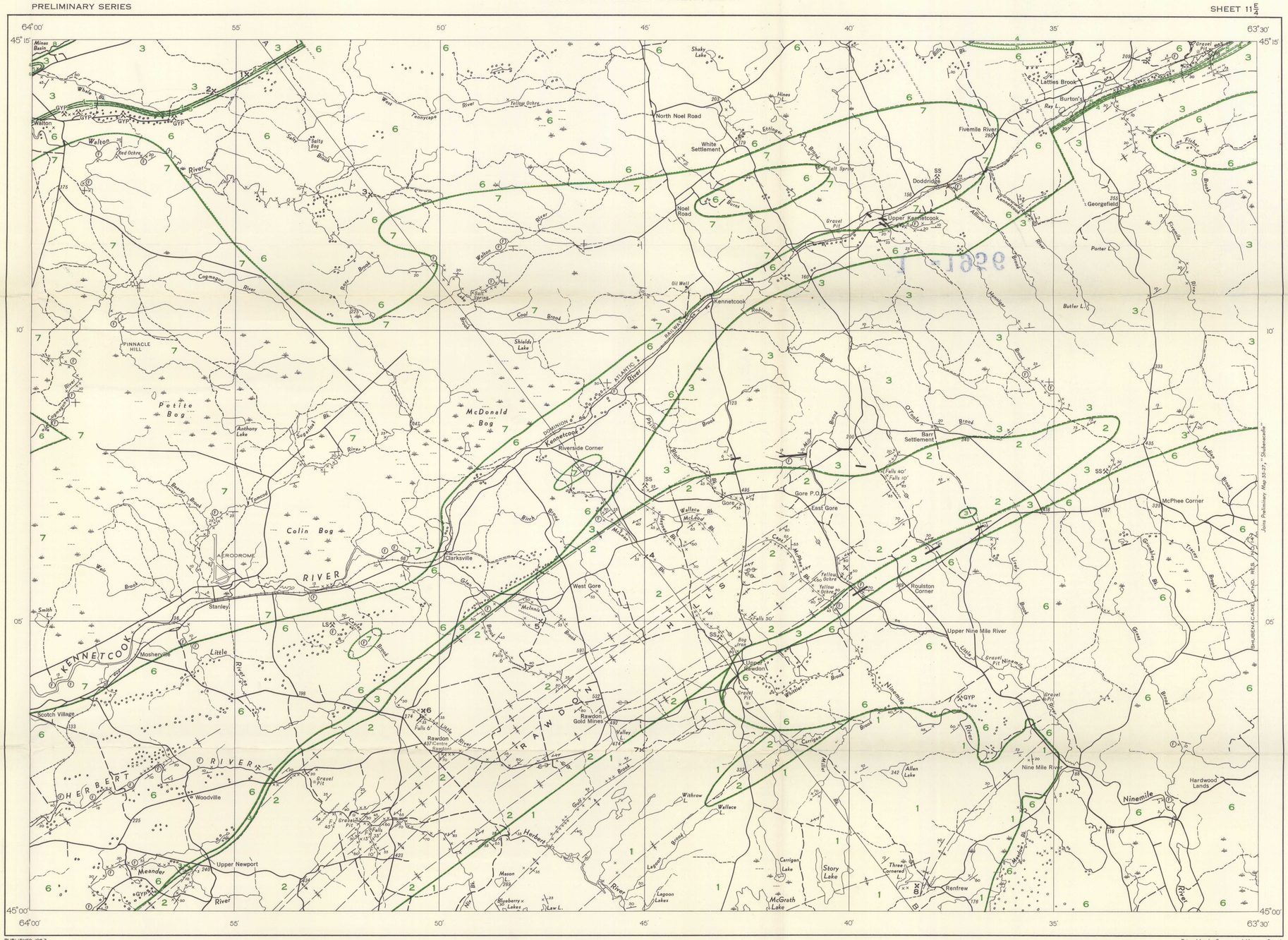
Geology by I. M. Stevenson, 1955

Main highway
Other roads
Trail
Indian Reserve boundary
Stream (position approximate)
Intermittent stream
Marsh
Height in feet above mean sea-level 240

Approximate magnetic declination, 23° 03' West

Cartography by the Geological Cartography Unit, 1956

Air photographs covering this map-area may be obtained through the National Air Photographic Library, Topographical Survey, Ottawa, Ontario



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MAP 1-1956

KENNETCOOK

HANTS COUNTY

NOVA SCOTIA

Scale: One Inch to One Mile = $\frac{1}{63,360}$

Miles

1 ½ 0 1 2 3

DESCRIPTIVE NOTES

The Goldenville formation (1) consists of alternate bands of quartzite and slate, with the former predominant. The quartzite is grey to greenish grey in colour, breaks with a conchoidal fracture, and commonly passes gradationally into narrow bands of siliceous, micaceous slate. It is conformably overlain by bluish black, ferruginous, graphitic slates of the Halifax formation (2), which contains narrow bands of schistose, greyish green quartzite, rarely exceeding a few feet in thickness. Both slates and quartzites contain cubes of pyrite along the bedding planes in some places.

Strata of the Meguma group have been folded into parallel, northeast-striking folds. The resulting anticlines are generally domed, and plunge gently to the northeast and southwest. The folds are tightly compressed and the strata commonly dip at angles ranging from 60 to 90 degrees. Schistosity is particularly well developed in the more competent quartzitic beds of the Halifax formation. Numerous quartz veins, of both the interbedded and transverse types, a few of which are auriferous, occur in strata of both the Goldenville and Halifax formations. The veins are particularly abundant on the crests and noses of the anticlines.

Meguma beds are overlain unconformably by rocks of the Horton group (3) of early Mississippian age. The Horton rocks are made up of a succession of coarse to fine clastic strata of continental origin. The contact with the older Meguma rocks is well exposed on Glen and McLean Brooks. Horton strata contain abundant plant remains and narrow bands of low grade coal outcrop at several localities. The Horton beds are normally overlain conformably by basal strata of the marine Windsor group (4-6).

The Macumber formation (4), consisting of grey, arenaceous, laminated limestone, is easily recognizable in the northwest and northeast corners of the map-area. Although not observed elsewhere in the area, it is undoubtedly present though concealed by the heavy drift cover. The Pembroke formation (5) conformably overlies the Macumber, and consists of red, massive limestone and limestone-conglomerate. The latter contains fragments of the Macumber formation as well as rounded pebbles of pre-Mississippian rocks.

The Pembroke formation is overlain conformably by a series of limestone, gypsum, anhydrite, and red shale beds (6) whose age relationships are in doubt. Although much of the series is probably of lower Windsor age, fossils from various localities, both north and south of Kennetcook River, indicate an upper Windsor age for at least part of the undivided Windsor sediments.

The uppermost beds of the Windsor series are overlain, apparently conformably, by a succession of buff-weathering sandstones and red shales of continental origin, referred to as the Scotch Village formation (7). Poorly preserved plant fossils indicate these rocks to be of probable early Pennsylvanian (Riversdale) age. Excellent exposures outcrop along Cogmagun and Tomcod Rivers.

Red conglomerate and sandstones of the Annapolis formation (8) of Triassic age outcrop in a narrow band along the shore of Minas Basin, in the extreme northwest corner of the map-area.

Evidence of glaciation is found throughout the entire area. The Rawdon Hills, which in places attain a maximum elevation of almost 600 feet, have been rounded and striated by the ice. The relatively flat low-lying Carboniferous areas are covered by an extensive drift mantle.

A deposit of auriferous stibnite occurs about 1 mile southwest of West Gore. The ore is found along fault planes in the Halifax slates, and consists of stibnite with associated pyrite, arsenopyrite, and native antimony and gold. The mine is at present inoperative, and all workings are flooded.

Gold mines formerly operated at Centre Rawdon, Rawdon Gold Mines, and Renfrew are at present inoperative. All workings are caved and/or flooded. Recent prospecting has been carried out on McLean Brook.

Abandoned manganese mines and prospects are found in the northwest part of the map-area on or near the Horton-Windsor contact.

A large gypsum quarry is at present being operated about 1 mile east of Walton. Gypsum and limestone have been quarried at numerous localities.

Gravel for road building and railroad ballast is available in plentiful supply.

Coal has been sought in the vicinity of Upper Kennetcook and East Gore and numerous pits have been dug in the Horton sediments near the Horton-Meguma contact. Where exposed, coal seams are narrow and of poor grade.

Crystals of galena, associated with calcite and quartz, were found in poorly exposed outcrops of impure limestone in the bed of the east branch of Walton River. This region warrants further examination.

The petroleum possibilities near Kennetcook were recently investigated by a well drilled ½ mile northwest of the village. Some salt was encountered at a depth of 1,300 feet but no oil was reported.

MAP 1-1956
KENNETCOOK
NOVA SCOTIA
SHEET 11 E/4